

and such a spot, for the sake of the curious 'mosses,' found about the rocks, and more such innocent, unconscious irony, conveying to him the impression that he is regarded as an individual, inoffensive perhaps, but somewhat monomaniacally devoted to a pursuit which has no end or aim beyond the collecting and classifying of weeds, and whom it is advisable to the artistic horticulturist to keep out of his garden as a ruthless destroyer, or an encourager of obstructive, unattractive 'curiosities.' Were education what it ought to be,—did Greek roots and the root of evil, with their accompaniments, absorb no more than their appropriate share of the time of our youth, the naturalist would perhaps have a fairer appreciation. For with the majority of mankind, it is only in youth that the mind is freely opened to the reception of new fields of knowledge, and seeing that even the small Latin and less Greek are mostly lost in the bustle of active life, it can hardly be expected that new modes of thought and observation, new sciences, will be readily taken up by the occupied adult; yet, if the young mind had been familiarized with the objects and methods of natural history, many and many a man, now a mere sportsman, a grower of prize turnips, or a hunter up of old first editions or rare copies, might have found delight and advanced human knowledge, in devoting his leisure to the promotion of some branch of inquiry, in which his intellect would have had a fair chance of being kept in healthy exercise and trained to the annihilation of prejudice.

These reflections have been awakened by the sight of the book before us, a translation of a little work written by one of the most distinguished among German botanists of the new school, for the purpose of popularizing the leading ideas of the science. The letters are intended for educated readers, and perhaps may be found to presuppose a larger infusion of scientific knowledge than is generally possessed here; but the conscientious reader, who will take the trouble to read them as carefully as he would a leader in 'The Times' on the subject of free trade or the law of settlement, will not find much more difficulty in understanding them, and will gain acquaintance with laws which have a rather more striking and permanent influence on the world's history.

The translation is fairly done,—perhaps is a little too much tinged with German idiom. As a small matter, but one partaking of the crying sin of modern literature, we must deprecate most strongly the introduction of new words and barbaric compounds, and in this view cannot forgive the expression plant-cell, plant-acid, &c. The wood-cut illustrations are very elegant.

*Synopsis des Caloptérygines.* Par M. E. DE SELYS-LONGCHAMPS.  
Brussels, 1853.

Every one who has wandered on a summer's day on the banks of any of our rivers, must have noticed a dragon-fly of considerable size, whose beautiful metallic tints, dark wings and graceful motions render it one of the most elegant denizens of such localities. This

insect is the *Libellula Virgo* of Linnæus ; it was placed by Fabricius in his genus *Agrion*, and adopted by Leach as the type of his genus *Calepteryx* (called *Calopteryx* by recent authors). Since the time of Leach many allied species have been described, some of which have been regarded by their describers as warranting the establishment of new genera, until at length the Linnæan species has become the type of a subfamily, to which the name of *Calopteryginæ* is applied, containing one hundred species, divided into no less than twelve genera. Of these two species only were known to Linnæus, and four to Fabricius ; Burmeister in 1839 only mentions sixteen species, and Rambur in the last general work upon the Neuroptera published in 1841, describes only twenty-seven. For the knowledge of the remainder science is indebted to the author of the small work whose title stands at the head of this notice.

The author informs us in his preface that this 'Synopsis' consists of the synoptical tables which he prepared for his own use whilst working upon a monograph of the *Calopteryginæ* which is now in the press. It is intended in fact to serve as a sort of prodromus to the larger work, and contains in a semi-tabular form, short characters of all the divisions, genera and species which will be described more fully in the latter. The reputation of M. de Selys-Longchamps renders it almost unnecessary for us to say anything with regard to the merits of his work ; we may observe however that it appears to have been executed with great care, the specific characters especially being very carefully drawn up.

The species are distributed into twelve genera—namely, 1. *Calopteryx* (*Calepteryx*, Leach) ; 2. *Neurobasis* (suppressed in an appendix and united with *Phaon*) ; 3. *Echo* ; 4. *Phaon* ; 5. *Vestalis* ; 6. *Heterina*, Hagen ; 7. *Euphæa* (including *Epallage*, Charp.) ; 8. *Heliogaris* ; 9. *Dicterias* ; 10. *Libellago* (including *Rhinocypha* and *Micromerus*, Ramb.) ; 11. *Amphipteryx* ; and 12. *Thore*, Hagen. Those genera to which no author's name is attached are due to M. de Selys himself. Of the higher groups or *Legions* the author gives the following tabular arrangement :—

				Legions. Genera.	
Fam. AGRIONIDÆ. Subfam. CALOPTERYGINÆ.	DIVISION I. The two sectors of the arculus arising from about its middle.	SUBDIV. I. Costal and subcostal nervules nearly equal in number.	SECTION I. Epistoma not prominent.	Pterostigma short or wanting .... 1. <i>Calopteryx</i> 1-6.	
			SECTION II. Epistoma very prominent .....	Pterostigma very long, regular .. 2. <i>Euphæa</i> .. 7-9.	
	DIVISION II. The two sectors of the arculus arising together from its apex .....	SUBDIV. II. Only 2-3 subcostal nervules ; costal nervules more numerous .....	3. <i>Libellago</i> .. 10.		
			4. <i>Amphipteryx</i> 11.		
				5. <i>Thore</i> ..... 12.	

Of the geographical distribution of these insects M. de Selys speaks as follows :—The *Calopteryginæ* are distributed over the whole of the warm and temperate portions of the globe, except in Oceania.

Half the species belong to the old world, which is inhabited by species of the Legions *Euphæa*, *Libellago* and *Calopteryx*. The genus *Hæterina*, containing thirty species, six species of *Calopteryx*, the genera *Heliocharis* and *Dicterias* each containing a single species, and the Legions *Amphipteryx* and *Thore*, are found in America, and principally in the tropical parts.

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## PROCEEDINGS OF LEARNED SOCIETIES.

### ROYAL INSTITUTION OF GREAT BRITAIN.

February 10, 1854.—Right Hon. Baron Parke, Vice-President, in the Chair.

*On the Structure and Homologies of Teeth.* By Prof. OWEN, F.R.S.

The Lecturer commenced by observing that, although the teeth were among the least vitalized of animal parts, and commonly possessed no power of repairing fracture or decay, they presented many phænomena of anatomical, physiological, and homological interest, a selection from which he proposed to offer as the subject of the evening's discourse.

Any hard body attached to the walls and projecting into the cavity of the mouth, where it is exposed to view when the mouth is open, is called a *tooth*: but the parts properly so called, are those which consist of a gelatinous basis, hardened by earthy salts, in which the phosphate of lime predominates. Such teeth are peculiar to the Vertebrate Classes. In them they present manifold varieties as to number, size, form, structure, position, and mode of attachment, but are principally adapted for seizing, tearing, dividing, pounding, or grinding the food; in some species they are modified to serve as formidable weapons of offence and defence; in others as aids in locomotion, means of anchorage, instruments for uprooting or cutting down trees, or for transport and working of building materials; they are characteristic of age and sex; and in man they have secondary relations subservient to beauty and to speech.

Teeth are always intimately related to the food and habits of the animal, and are therefore highly interesting to the physiologist: they form for the same reason important guides to the naturalist in the classification of animals; and their value, as zoological characters, is enhanced by the facility with which, from their position, they can be examined in living or recent animals; whilst the durability of their tissues renders them not less available to the palæontologist in the determination of the nature and affinities of extinct species, of whose organization they are often the sole remains discoverable in the deposits of former periods of the earth's history.

Teeth are not of a uniform tissue or substance like bone: that which forms the body of the tooth is called "dentine;" the tissue which forms the outer crust is called "cement;" and in most Vertebrata a third substance is situated between the dentine and cement,